

Customer No.: 31561
Application No.: 10/707,874
Docket No.: 9945-US-PA-1

REMARKS

Present Status of the Application

Claims 8-20 remain pending of which claims 8 and 17 have been amended to more explicitly describe the claimed invention. Amendments to the proposed claims 8 and 17 are well support at FIG. 3A-3D and 4A-4D, and related texts. Therefore, it is believed that no new matter adds by way of amendment to claims or otherwise to the application.

In the outstanding Final Office Action, claims 8-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US-6,420,237, hereinafter Chang) in view of Wong et al. (US-6,747,986, hereinafter Wong).

Applicants respectfully submit that the present invention is directed to a method of fabricating a multi-bit flash memory. The amended proposed independent claim 8, among other things, recites at least the steps comprising patterning the gate dielectric layer and the conductive layer to form a floating gate comprising a predetermined number of conductive blocks arranged in an array having pluralities of rows and columns, wherein each row comprises a plurality of conductive blocks and each column comprises a plurality of conductive blocks, and wherein the patterned gate dielectric layer is formed vertically above said predetermined number of blocks arranged in said array; and forming a control gate on the floating gate so that each multi-bit cell of the multi-bit flash memory comprises said control gate, said patterned gate dielectric layer and said floating gate comprising said plurality of conductive blocks arranged in said

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array]. The advantage of above features is that at least more than two bits of information may be stored in a single memory cell and thereby increase the storage capacity.

Applicants respectfully submit that proposed independent claim 8, as amended, is allowable over Chang and Wong because both Chang and Wong substantially fail to teach suggest or disclose every features of the claimed invention. More specifically, both Chang and Wong substantially fails to teach, suggest or disclose a method of fabricating a multi-bit flash memory comprising at least a step of [*patterning the gate dielectric layer and the conductive layer to form a floating gate comprising a predetermined number of conductive blocks arranged in an array having pluralities of rows and columns, wherein each row comprises a plurality of conductive blocks and each column comprises a plurality of conductive blocks, and wherein the patterned gate dielectric layer is formed vertically above said predetermined number of blocks arranged in said array; and forming a control gate on the floating gate so that each multi-bit cell of the multi-bit flash memory comprises said control gate, said patterned gate dielectric layer and said floating gate comprising said plurality of conductive blocks arranged in said array*] as required by the amended proposed independent claim 8.

Instead, Chang substantially teaches a method of fabricating a TWIN Bit Cell flash memory, wherein the insulating region (87) divides the conductive layer (86) into TWO conductive blocks (86), a dielectric layer (90) and a control gate 91 formed over the two conductive blocks (86) (please see 5-9, and lines 38-41 of col. 4). However, Chang fails to teach or disclose any multi-bit cell flash memory comprising a control gate, a patterned gate dielectric layer and a floating gate comprising said plurality of conductive

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blocks arranged in said array having pluralities of rows and columns, wherein each row comprises a plurality of conductive blocks and each column comprises a plurality of conductive blocks as required by the amended proposed independent claim 8, instead Chang substantially teaches a twin bit cell flash memory comprising only TWO conductive block (86) arranged in a row and only ONE conductive block (86) arranged in a column. Therefore, it is clear that Chang and Wong neither alone nor in combination can possibly render every feature of the proposed amended independent claim 8 in this regard.

Furthermore, Applicants respectfully submit that the step of performing threshold voltage adjustment of Wong still cannot cure the specific deficiencies of Chang for at least the reason substantially discussed above. Accordingly, Applicants respectfully submit that combination of Chang and Wong, in a manner suggested by the Office Action, cannot possibly render the claimed invention as claimed in the proposed independent claim 8 obvious in this regard.

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Because the amended proposed independent claim 17 also recite features that are similar to the amended proposed independent claim 8, therefore Applicants similarly submit that claim 17 also patentably defines over Chang and Wong for at least the same reasons discussed above.

Claims 9-16 and 18-20, which directly or indirectly depend from independent Claims 8 and 17, respectively, are also patentable over Chang and Wong at least because of their dependency from an allowable base claim.

For at least the foregoing reasons, Applicant respectfully submits that claims 8-20 patentably define over Chang and Wong. Reconsideration and withdrawal of above rejections is respectfully requested.

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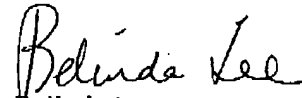
CONCLUSION

For at least the foregoing reasons, it is believed that all pending claims 8-20 are in proper condition for allowance. If the Examiner believes that a conference would be of value in expediting the prosecution of this application, he is cordially invited to telephone the undersigned counsel to arrange for such a conference.

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